

ABSTRACT

There are provided an ultrasonic transducer (2) that performs transmission and/or reception of an ultrasonic wave and a propagation medium portion (6) that forms a propagation path of the ultrasonic wave. A density ρ_1 and an acoustic velocity C_1 of the propagation medium portion (6) and a density ρ_2 and a sound velocity C_2 of a fluid that stuffs a circumjacent space are appropriately set, and a propagation loss of the ultrasonic wave into the fluid is reduced to almost zero by refracting the ultrasonic wave at an appropriate angle.